

## WHAT IS CLAIMED IS:

1. A method of retrieving data from a disk, comprising:

*Sub A*  
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determining the network transfer rate of a network connection between a client and a server;

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responsive to a data request received by the server from the client via a network connection, retrieving a first portion of the requested data from the disk;

initiating transmission of the first portion of data to the client via the network;

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calculating the time required to transmit the first portion of data to the client based upon the network transfer rate; and

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retrieving a subsequent portion of the requested data from disk based, at least in part, on whether the calculated time is expired.

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2. The method of claim 1, wherein determining the network transfer rate comprises determining the network transfer rate of a TCP connection between the client and the server.

3. The method of claim 1, wherein retrieving a first portion of the requested data comprises retrieving data from a first block of the disk.

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4. The method of claim 1, wherein determining when to retrieve a subsequent portion of the requested data from disk includes delaying retrieval of the subsequent portion until the calculated time is expired to minimize the server system memory required to complete the file request.

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5. The method of claim 1, wherein determining when to retrieve the subsequent portion of the requested data includes determining when to retrieve the subsequent portion based at least in part

on the distance between the current head position and the disk location of the subsequent portion of data.

6. The method of claim 1, wherein determining when to retrieve a subsequent portion of the requested data from disk includes monitoring the position of the disk head while the first portion of data is being transmitted to the client.

7. The method of claim 6, further comprising determining the disk location of the subsequent portion of data associated with the first request and determining the disk location of a portion of data associated with a second file request.

8. The method of claim 7, further comprising retrieving the portion of data associated with the second file request if the data is closer to the current head position than the data associated with the subsequent portion of the first file request.

9. The method of claim 8, further comprising retrieving the subsequent portion of data associated with the first file request after the calculated time expires.

10. A computer program product comprising a computer readable medium containing computer executable instructions for retrieving data from disk comprising:

computer code means for determining the network transfer rate of a network connection between a client and a server;

25 computer code means for retrieving a first portion of the requested data from the disk responsive to a data request received by the server from the client via a network connection;

30 computer code means for initiating transmission of the first portion of data to the client via the network;

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computer code means for calculating the time required to transmit the first portion of data to the client based upon the network transfer rate; and

computer code means for retrieving a subsequent portion of the requested data from disk based, at least in part, on whether the calculated time is expired.

11. The computer program product of claim 10, wherein the code means for determining the network transfer rate comprises code means for determining the network transfer rate of a TCP connection between the client and the server.

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12. The computer program product of claim 10, wherein the code means for retrieving a first portion of the requested data comprises code means for retrieving data from a first block of the disk.

13. The computer program product of claim 10, wherein the code means for determining when to retrieve a subsequent portion of the requested data from disk includes code means for delaying retrieval of the subsequent portion until the calculated time is expired to minimize the server system memory required to complete the file request.

14. The computer program product of claim 10, wherein the code means for determining when to retrieve the subsequent portion of the requested data includes code means for determining when to retrieve the subsequent portion based at least in part on the distance between the current head position and the disk location of the subsequent portion of data.

25 15. The computer program product of claim 10, wherein the code means for determining when to retrieve a subsequent portion of the requested data from disk includes code means for monitoring the position of the disk head while the first portion of data is being transmitted to the client.

30 16. The computer program product of claim 15, further comprising computer code means for  
determining the disk location of the subsequent portion of data associated with the first request

and computer code means for determining the disk location of a portion of data associated with a second file request.

17. The computer program product of claim 16, further comprising computer code means for  
5 retrieving the portion of data associated with the second file request if the data is closer to the  
current head position than the data associated with the subsequent portion of the first file request.

18. A data processing system, comprising:

10 at least one disk;

a server connected to a network and having access to the disk, wherein the server is further connected to a client via a TCP connection;

wherein the system includes:

computer code means for determining the network transfer rate of a network connection between a client and a server;

computer code means for retrieving a first portion of the requested data from the disk responsive to a data request received by the server from the client via a network connection;

25 client via the network;

computer code means for initiating transmission of the first portion of data to the client via the network;

computer code means for calculating the time required to transmit the first portion of data to the client based upon the network transfer rate; and

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computer code means for determining when to retrieve a subsequent portion of the requested data from disk based, at least in part, on whether the calculated time is expired.

5 19. The system of claim 18, wherein the code means for retrieving a first portion of the requested data comprises code means for retrieving data from a first block of the disk.

10 20. The system of claim 18, wherein the code means for determining when to retrieve a subsequent portion of the requested data from disk includes code means for delaying retrieval of the subsequent portion until the calculated time is expired to minimize the server system memory required to complete the file request.

15 21. The system of claim 18, wherein the code means for determining when to retrieve the subsequent portion of the requested data includes code means for determining when to retrieve the subsequent portion based at least in part on the distance between the current head position and the disk location of the subsequent portion of data.

20 22. The system of claim 18, wherein the code means for determining when to retrieve a subsequent portion of the requested data from disk includes code means for monitoring the position of the disk head while the first portion of data is being transmitted to the client.

25 23. The system of claim 22, further comprising computer code means for determining the disk location of the subsequent portion of data associated with the first request and computer code means for determining the disk location of a portion of data associated with a second file request.

24. The system of claim 23, further comprising computer code means for retrieving the portion of data associated with the second file request if the data is closer to the current head position than the data associated with the subsequent portion of the first file request.